

AMENDMENTS TO THE SPECIFICATION:

Please amend the specification as follows:

Page 20, first full paragraph:

① A Fasttrak II system (produced by Polhemus Corporation) can be given as an example of this type of measurement system 10. Conventionally, when performing image measurements from images taken by a CCD video camera, the sampling period of the captured image is 1/60 ~~sec~~ seconds, and measurement resolution of the position of the grip portion is from 1 to 2 mm, but the time sequence data of the Fasttrak II system are acquired in a sampling period of, for example, 1/120 ~~sec~~ seconds, measurement resolution of 0.8 mm, and a rotational angular resolution of 0.15 ~~deg~~ degrees. More detailed information regarding behavior of the grip portion 14 during the swing can therefore be obtained, because the sampling period is shorter, and the resolution higher, compared to that of conventional methods.

Furthermore, measuring the rotation angle of the shaft of the golf club, and the wrist angle, by image measurements of images captured by CCD video camera is difficult by nature. For example, even though measurements can be performed by attaching a special jig to the golf club, the rotation angle around the shaft axis data and the wrist angle data cannot be obtained at a resolution so much high as that of the measurement system by magnetic field of the present invention, for example the 0.15 ~~deg~~ degrees resolution of the Fasttrak II system.

In addition, at most, on the order of 2 ~~sec~~ seconds of swing data, for example the three dimensional position coordinates (x, y, z) and the posture

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angles (θ_y , θ_p , θ_r) for a total of 6 types of data, are obtained with the Fastrak II system. Compared to performing image measurements by capturing images by CCD video camera and then analyzing the images, the amount of data handled is extremely low in the Fastrak II system, and the processing speed is also overwhelmingly fast.

Page 27, third paragraph through Page 28:

As for the arm angle θ_1 , by taking the angle of the impact direction D as 0 ~~deg~~ degrees, and the counter clockwise direction from the impact direction D in the figure as positive, the arm angle θ_1 is obtained to show a position of the grip portion 14 from the tree dimensional coordinates (x, y, z) and the center position of the swing path arc B, as shown in Fig. 6A (step 105). In addition, at the top state the arm angle θ_1 is near a range of 90 to 135 ~~deg~~ degrees, and at the impact state, it has a range slightly exceeding 270 ~~deg~~ degrees.

The wrist angle θ_2 is established that a direction of a straight line taken from the center position of the swing path arc B to a moving position of the grip portion 14 be a direction with 0 ~~deg~~ degrees of the wrist angle, and on the basis of this direction, a direction in which the shaft 13 of the golf club 12 proceeds in the impact direction is taken as positive, while the opposite direction is taken as negative. In other words, the wrist angle θ_2 is defined as the direction of the shaft 13 of the golf club 12, namely by an angle obtained by subtracting the arm angle θ_1 showing a position of the grip portion 14 from an angle θ_4 with respect to the D direction shown in the figure, and the wrist angle θ_2 is extracted based on

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this definition. The golf club 12 shows a negative wrist angle in the figure. The wrist angle θ_2 is thus extracted from the swing path arc B (step 106).

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The golfer G_4 has a constant shaft rotation angle θ_3 of approximately 60 ~~deg~~ degrees from the top state to a state at which the arm angle θ_1 is 270 ~~deg~~ degrees, and the shaft angle θ_3 then changes abruptly in a narrow range from that location to the impact state P. On the other hand, the golfer G_3 does not maintain a constant shaft angle θ_3 it is always changing. It is thus understood that, compared to the golfer G_3 , the golfer G_4 possesses the characteristics of a swing with weak roll.